

Math 212
Requiz 08A

F 21 Oct 2016 / N 23 Oct 2016

Your name: _____

Exercise

(5 pt) Let $\mathbf{r} : \mathbf{R} \rightarrow \mathbf{R}^3$ be the position function of a particle. Prove that if the particle moves with constant speed, then its acceleration vector is orthogonal to its velocity vector at every point (i.e. at all times t). *Hint:* What is the definition of speed? If speed is constant, what about its square?